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#### **REMARKS**

The present response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application are respectfully requested.

Applicant asserts that the present invention is new, non-obvious and useful. Prompt consideration and allowance of the claims are respectfully requested.

#### **Status of Claims**

Claims 1-21 are pending in the application.

Claims 1-21 have been amended. Applicant respectfully asserts that the amendments to the claims add no new matter.

#### **Remarks to the Specification**

In the Office Action the Examiner objected to the Disclosure because of informalities.

Paragraphs [001] and [0010]-[0016] have been amended to correct typographical errors. These amendments are editorial in nature and do not introduce new matter.

#### **Remarks to the Abstract**

In the Office Action, the Examiner objected to the Abstract because of grammatical/stylist preferences.

Without conceding the appropriateness of this objection, Applicant respectfully asserts that, in view of the amendment to the Abstract, the objection to the Abstract is overcome.

#### **Remarks to the Title**

In the Office Action the Examiner objected to the Title as not being descriptive.

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The Title has been amended to recite "System, Device, and Method of Maintaining in an Array Loop Iteration Data Related to Branch Entries of a Loop Detector". Without conceding the appropriateness of this objection, Applicant respectfully asserts that this amendment overcomes the objection to the Title.

## CLAIM REJECTIONS

### 35 U.S.C. § 102 Rejections

In the Office Action, the Examiner rejected claims 1, 3-6, 8-9, 11-13, 16-17 and 19-21 under 35 U.S.C. § 102(e), as being anticipated by Arora et al. (US Patent 6,629,238).

Applicant respectfully submits that, in view of the following remarks, claims 1, 3-6, 8-9, 11-13, 16-17 and 19-21, as amended, are not anticipated by Arora et al. in view of the remarks that follow.

As is well established, in order to successfully assert a prima facie case of anticipation, the Examiner must provide a single prior art document that teaches every element and limitation of the claim or claims being rejected.

Each of amended independent claims 1, 16, and 19 recite an array able to maintain a set of iteration entries, wherein said set of iteration entries includes a second number of entries smaller than said first number of entries, wherein said loop detector is able to allocate at least one of said iteration entries to store loop iteration data relating to at least one branch entry of said set of branch entries, respectively (emphasis added). It is respectfully asserted that Arora et al. does not teach or fairly suggests at least these features of the claimed invention.

Amended independent claim 11 recites allocating an entry of an array associated with said loop detector to store loop iteration data relating to a branch entry of said set of branch entries, wherein said array is able to maintain a set of iteration entries, said set of iteration entries includes a second number of entries smaller than said first number of entries (emphasis added). It is respectfully asserted that Arora et al. does not teach or fairly suggests at least these features of the claimed invention.

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Amended independent claim 5 recites determining if loop iteration data for a branch of said set of branches is stored in an entry of an array associated with said loop detector, said array able to maintain a second number of entries smaller than said first number of entries (emphasis added). It is respectfully asserted that Arora et al. does not teach or fairly suggests at least these features of the claimed invention.

Thus, it is respectfully requested that the rejection of independent claims 1, 5, 11, 16, and 19 under 35 U.S.C. 102§(e) in view of Arora et al. be withdrawn.

Furthermore, it is respectfully submitted that independent claims 1, 5, 11, 16, and 19 are patentable, and thus allowable, over the prior art references on record and any combination thereof. In this regard, it is noted that the distinguishing features of independent claims 1, 5, 11, 16, and 19, as discussed above, would not have been obvious at the time the invention was made to a person skilled in the art, in view of Arora et al., alone or in combination with any other cited references, including the "Intel Processor Microarchitecture" and/or "Inside the Intel Itanium 2" Processor references, which were cited by the Examiner in rejecting claims 2, 10, 15, and 18 under 35 U.S.C 103.

Claims 3-4 depend directly from independent claim 1 and incorporate all the elements of this claim. Claims 6 and 8-9 depend directly from independent claim 5 and incorporate all the elements of this claim. Claims 12-13 depend directly from independent claim 11 and incorporate all the elements of this claim. Claim 17 depends directly from independent claim 16 and incorporates all the elements of this claim. Claims 20-21 depend directly from independent claim 19 and incorporate all the elements of this claim. Therefore, it is respectfully submitted that claims 3-4, 6, 8-9, 12-13, 17, and 20-21 are patentable, and thus allowable, at least for the reasons set forth above.

### 35 U.S.C. § 103 Rejections

In the Office Action, the Examiner rejected claims 2, 10, 15 and 18 under 35 U.S.C. § 103(a), as being unpatentable over Arora et al. in view of the Intel Processor Microarchitecture Reference. The Examiner rejected claims 7 and 14 under 35 U.S.C. §

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103(a), as being unpatentable over Arora et al. in view of the Inside the Intel Itanium 2 Processor.

Claim 2 depends directly from independent claim 1 and incorporates all the elements of this claim. Claims 7 and 10 depend directly from independent claim 5 and incorporate all the elements of this claim. Claims 14 and 15 depend directly from independent claim 11 and incorporate all the elements of this claim. Claim 18 depends directly from independent claim 16 and incorporates all the elements of this claim. Therefore, it is respectfully submitted that claims 2, 7, 10, 14, 15, and 18 are patentable, and thus allowable, at least for the reasons set forth above.

In view of the foregoing amendments and remarks, the pending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Please charge any fees associated with this paper to deposit account No. 50-3355.

Respectfully submitted,

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Dated: August 2, 2006

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